

## Science and Policy Perspectives: National Security Implications of Climate Change

Roundtable on the *National Security Implications of Climate Change* that will be hosted by Congresswoman Eddie Bernice Johnson, Ranking Member of the House Committee on Science, Space & Technology and Congressman Donald Beyer

Ranking Member Johnson, Congressman Beyer, and Members of the Committee. Thank you for hosting this roundtable on the National Security Implications of Climate Change and for asking me to participate. This statement for the record reflects my in-person testimony. It builds off the more than 10 years of research into this issue by the American Security Project.

The American Security Project was founded in 2005 as a bipartisan initiative to tackle long-term challenges from a national security perspective, not encumbered by political bias. Our focus issues range from non-proliferation to counter-terrorism, American competitiveness to energy security. Our founders, Senators Kerry, Hagel, Hart, and Rudman, asked a host of retired general and admirals to join ASP because their only interest was the security of our country; they had spent years defending our country and planning for contingencies.

Today, I'm here to tell you that the long-term effects of climate change present clear threats to our country's security, and to the stability of the world. At ASP, our research on this issue is grounded in a real understanding of the long-term threats posed to our nation – from all areas. In the 21<sup>st</sup> century, climate change is adding a new, destabilizing influence to global affairs.

The mission of the Department of Defense is simple and straightforward – it is to provide the military forces needed to deter war and to protect the security of our country. Implicit in that mission is that our military needs to be prepared for every threat. Unfortunately, a changing climate adds to those threats. The national security community, including both our Department of Defense and the Intelligence Community have labeled climate change a “threat multiplier,” or “an accelerant to instability.”

Let me be clear: climate change alone will not cause wars, but it makes already existing threats worse. The threat of global warming for security will manifest through a range of effects: resource scarcity, extreme weather, food scarcity, water insecurity, and sea level rise will all threaten societies around the world. Too many governments are not prepared for these threats, either because they do not have the resources or because they have not planned ahead. How societies and governments respond to the increase in instability will determine whether climate change will lead to war.

To understand how climate change threatens national security, we should break the threats into what I will call strategic threats – how conflicts can be either induced or exacerbated by climate change – and tactical threats – where climate change directly impacts our military's ability to perform its mission, or forces our military to respond. Examples will include rising sea levels

that affect our coastal bases and stations, to catastrophic weather that not only impacts our bases and stations, but also impacts our citizens – and humanity worldwide. Superstorm Sandy and Typhoon Haiyan are but two examples.

On the strategic side, we can show where climate change – specifically a drought made deeper and longer because of man-made climate change – provided some of the fuel that ignited the Arab Spring. While this will be covered by another speaker, droughts in the Middle East and the Sahel, fueled by climate change, are having dramatic effects.

Let's dig further into one overlooked conflict that "sprung" from the Arab Spring: Mali. In late 2012, the Tuaregs, a traditionally nomadic tribe based in the dry northern section, rose up against the government after two years of deep drought that had killed their livestock. Now, the Tuaregs have been calling for separation from the south for over two decades but had not successfully rose in rebellion until that conflict. Climate change strengthened, multiplied, and accelerated this already existing tension.

Northern Mali and the surrounding Sahel region are burdened by chronic droughts. Across the Sahel – the savannah land that separates the Sahara Desert from the lush regions of Central and West Africa – millions of people's livelihoods are threatened as rivers shrink, fertile land turns to desert and insect infestations become more prevalent. We see that the effects of a changing climate are pushing thousands of people out of their villages towards urban centers and squeezing natural resources to their limits. This exacerbates existing tensions.

When combined with already existing threats like radical Islam, a surge of new weapons from other conflicts around the region, persistent economic dislocation, and accelerating population growth, the region is ripe to be destabilized. In Mali, the French provided the fighting force that successfully put down the Tuareg's revolt in conjunction with African Union forces. They continue to base 1,600 soldiers in Mali's north to enforce a fragile peace.

We all should be concerned that similar conflicts across the Sahel region in Africa could erupt. Already a source of migration, the region is one of the world's most vulnerable to climate change, as drought and food insecurity have always threatened the area. It is not an exaggeration to say that there is a potential for millions of climate refugees over the next few decades, as we know there will be more droughts, more unpredictable weather, and more conflict to drive people out.

There is one other hot-spot worth discussing: Bangladesh and the regions surrounding the Bay of Bengal face an unprecedented crisis with sea level rise – which could cause upward of 30 million more refugees. With a population of more than 300 million people (91 million in West Bengal, 42 million in Odisha, 142 million in Bangladesh, 52 million in Burma), tense militarized borders, overlapping ethnic and religious communities, and uncertainty about the future, there is no region in the world that faces a more dangerous combination of threats from climate change than here.

Bangladesh, as a country predominantly composed of river delta, is at dire risk. It stands to lose 11% of its territory – home to 15 million people – from a sea level rise of only 1 meter, a level that is not a particularly extreme prediction over the next 4 decades. Few invading armies could do worse damage. Certainly, that will drive many of those 15 million people to move. How that migration is controlled, directed, and managed will determine whether it will be peaceful. Certainly, recent international migrant flows of only a fraction of this level have been far from peaceful.

On our “tactical” side, all of our bases and stations that are in coastal plains are threatened. Eglin Air Force Base in Florida; Marine Depots at Parris Island and San Diego; the Naval Base at Diego Garcia. Climate change poses costly threats to our domestic installations and potentially destabilizing threats to our international installations that hold strategic importance to the U.S. military. Catastrophic weather is increasing, and this is impacting several bases and stations. Parris Island has now been evacuated twice in the last two decades due to impending hurricanes - more than in recent memory. Flooding has closed Eglin Air Force Base multiple times in the last two years. And the Air Force is now talking about raising up buildings that would be flooded.

In order to prepare for these changes and to secure our military investments worldwide, the U.S. must invest in low-cost adaptation options, which are effective and multidimensional. The Department of Defense must make it a priority to understand the effects of climate change on both its operations and fixed installations as changes to environmental resources and man-made infrastructure intensify.

Perhaps the only good news is that DoD is well aware of these threats and trying to plan around them, but money and time are in short supply. The DoD should complete a comprehensive assessment of the potential impacts of climate change on its installations and missions globally.

I commend the House Armed Services Committee for passing an Amendment saying that climate change “is a direct threat to the national security of the United States” and that military installations “must be able to effectively prepare to mitigate climate damage.” This Amendment calls for the DoD to identify the 10 most threatened bases, as a way to determine how to reduce risk. Congress should ensure that language remains in the final version of the NDAA.

Ultimately, all of this is an argument for risk management: something that militaries do well. I spent my career in military planning: we assessed threats and recommended action against them, based on RISK.

Risk assessment means that, even if you choose not to believe that human activity contributes to climate change, we cannot wait until you have 100% certainty. We know that waiting for certainty on the battlefield can be disastrous. In 2002, Dick Cheney said: *“If there's a 1% chance that Pakistani scientists are helping al-Qaeda build or develop a nuclear weapon, we have to treat it as a certainty in terms of our response. It's not about our analysis ... It's about our response.”*

Our certainty level is well above this. You've heard that over 97% of climate scientists believe in the basic facts about climate change – but you can also just use your eyes. All of this argues for prudent, no regrets action to reduce emissions and build greater resiliency now in order to reduce future risk. Our politicians and the public should take a lesson from the military. We should start by acknowledging the risks of climate change are real and growing every day.

I would argue that a Risk Management approach to addressing global warming would go through three tiers of action: first, adapt to moderate warming; second, reduce emissions to reduce the risks of the worst effects over time; and third, prepare contingency plans – and monitor the data – for disastrous tipping points. I believe we cannot afford to ignore the risks of a changing climate.

Thank you for this opportunity, and I look forward to your questions.

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